DEPARTMENT OF TRANSPORTATION
DES-OE MS #43
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**** WARNING ** WARNING ** WARNING ** WARNING ****
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March 19, 2004

04-SF-80-13.2/13.9
04-0120F4
ACBRIM-080-1(095)N

Addendum No. 20

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN FRANCISCO COUNTY IN SAN FRANCISCO FROM 0.6 KM TO 1.3 KM EAST OF THE YERBA BUENA TUNNEL EAST PORTAL.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on May 26, 2004.

This addendum is being issued to revise the Project Plans and the Notice to Contractors and Special Provisions.

Project Plan Sheets 69, 76, 77, 78, 96, 97, 118, 142, 150, 151, 169, 170, 186, 203, 205, 206, 219, 220, 249, 250, 257, 280, 281, 282, 283, 285, 291, 292, 310, 593, 595, 596, 598, 599, 603, 615, 620, 624, 624A, 635, 639, 653, 656, 685, 746, 754, 774, 853, 886, 887, 889, 910, 911, 912, and 917 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 142A, 150A, 170A, 170B, 170C, 203A, 205A, 220A, 220B, 220C, 380A, and 380B are added. Half-sized copies of the added sheets are attached for addition to the project plans.

In the Special Provisions, "NOTICE TO CONTRACTORS," the fourth and fifth paragraphs are revised as follows:

"This project has a goal of 5 percent disadvantaged business enterprise (DBE) participation."

"Bidders are highly encouraged to attend a Contractors' Outreach meeting at the Old Oakland Army Base - BACSIS Building, 2485 West 14th Street, Oakland, California. The meeting will be held on April 8, 2004, from 9:00 a.m. to 12:30 p.m. The purpose of this meeting is to exchange information related to Disadvantaged Business Enterprises and allow for networking between participants related to work opportunities associated with the project. Subcontractors are also encouraged to attend."

In the Special Provisions, Section 2-1.02A, "DBE GOAL FOR THIS PROJECT," the first paragraph is revised as follows:

"The Department has established the following goal for Disadvantaged Business Enterprise (DBE) participation for this project:

Disadvantaged Business Enterprise (DBE): 5 percent."

In the Special Provisions, Section 5-1.16, "INTERGRATED SHOP DRAWINGS," is revised as attached.

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In the Special Provisions, Section 5-1.27, "PAYMENTS," the last paragraph is revised as follows:

"To be eligible for these payments, the Contractor shall furnish an advance payment bond or first demand bank guarantee to secure the value of potential partial payments for material furnished but not incorporated in the work pursuant to these special provisions and Section 9-1.06, "Partial Payments," of the Standard Specifications. The advance payment bond or first demand bank guarantee shall be in a sum equal to at least 25% of the executed contract price, and shall, at a minimum, match the terms of the sample advance payment bond or first demand bank guarantee forms identified in "Project Information" in these special provisions. The Contractor shall certify in writing to the Engineer that the proposed bonding company or bank complies with these special provisions. The bonding company shall be licensed to do business in the State of California, and shall be certified to write a bond equal to 30% of the executed contract price by the United States Department of the Treasury. The bank shall have United States operations with a minimum rating of "A-" by either AM Best or Standard & Poor. All alterations, extensions of time, extra and additional work, and other changes authorized by these special provisions or any part of the contract may be made without securing the consent of the surety of the bond or the bank."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "SLOPE RESTORATION," is added under subsection "WORKING DRAWINGS," as follows:

"**Slope Restoration**

Attention is directed to the existing steep slope at Yerba Buena Island between Bent W2 and Building No. 262 (Torpedo Building). The slope, and any other areas affected by the construction and removal of temporary towers, shall be restored to the original (existing) grade by the Contractor and approved by the Engineer.

The Contractor shall submit to the Engineer slope restoration working drawings that include existing contour grading, restoration procedures, erosion control treatment, materials, and design calculations for any earth reinforcement and support structure for the restoration of the slope. Areas excavated shall be returned to pre-excavation conditions.

Any work that will change the existing contour grade of the slope will not be allowed before slope restoration working drawings are approved."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "MEASUREMENT AND PAYMENT," the second paragraph is revised as follows:

"The contract lump sum price paid for furnish and remove temporary tower, of the types listed in the Engineer’s Estimate, shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in temporary towers, complete in place, including designing, constructing, maintaining, and removing temporary towers, furnishing and installing temporary tower foundations, temporary tower foundation installation submittals, monitoring and redriving piles, necessary grade adjustment and displacement monitoring, as shown on the plans, and all work involved with slope restoration, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

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In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "GENERAL," the first paragraph is revised as follows:

"Attention is directed to "Construction Surveying," of these special provisions. The entire top surface of the completed orthotropic deck shall be constructed true to the required grade within a tolerance of one millimeter per meter of span length. Span lengths are defined as follows:

A. 180 meters between panel points 8 and 42
B. 385 meters between panel points 43 and 119
C. 45 meters between panel points 120 and 128

In addition, the deviation from the cross-slope measured between girder lines W2 and E2 shall not exceed 1:500."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," the subsection "SEA TRANSPORTATION" is added after subsection "TEMPLATE" as follows:

"**SEA TRANSPORTATION**

Steel segments for the tower, box girder, crossbeams and bikepath shall be adequately supported, fastened and braced during transportation to prevent damage and fatigue.

Sixty days prior to loading the segments for shipment, the Contractor shall submit to the Engineer a transportation plan for the steel segments. The transportation plan shall include details of the support and tie down system, analysis and design calculations for the segments, the interaction between the vessel and the segments and the assumed sea conditions. The calculations shall show that stresses are within the allowable stresses during construction as specified in Section 2.8 of the San Francisco-Oakland Bay Bridge Design Criteria and the fatigue stress levels are within the constant-amplitude fatigue threshold per AASHTO Bridge Design Code. The transportation plan shall be signed by a licensed Naval Architect or a certified Naval Architect with a graduate degree in Naval Architecture and minimum 5 years of qualifying professional experience practicing Naval Architecture.

Upon arrival at the project site, the Contractor shall submit to the Engineer a daily log of actual sea conditions for the route taken by the transport ship as published by the National Oceanic and Atmospheric Administration.

After arrival at the site, the Engineer will perform a visual inspection of the steel segments. The Contractor shall notify the Engineer at least 5 days before the segments are ready for inspection. The Contractor shall provide all necessary and safe access for the Engineer's inspection including removal of bracing and fastening members. The Engineer will perform a visual inspection of the steel segments for loose bolts, cracks or other damage. If cracks are discovered, the Engineer will have the discretion of verifying the cracks using magnetic particle (MT) or liquid penetrant (PT) testing. The Contractor shall allow 3 days for the Engineer's inspection for each shipment of steel segments.

If cracks are discovered, the damaged segments will be rejected and the Contractor shall submit to the Engineer a repair plan to repair the damage. The repair plan shall include the cause of the cracks, a log identifying each crack by marking and location, an analysis of the extent of the damage in the segments and a repair plan for all damaged segments documenting the proposed method for repair. The Contractor shall allow 14 days for the Engineer's review and approval of the repair plan. The Contractor shall also submit a mitigation plan to the Engineer for approval. The mitigation plan shall include measures to be taken by the Contractor to prevent damage from occurring in the remaining segments. The Contractor shall allow 21 days for the Engineer's review and approval of the mitigation plan.

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Should actual sea conditions be more severe than those used in the transportation plan analysis, the steel segments will be rejected unless the Contractor can demonstrate through submittal of a revised transportation plan that stresses are within the allowable stresses during construction as specified in Section 2.8 of the San Francisco-Oakland Bay Bridge Design Criteria and the fatigue stress levels are within the constant-amplitude fatigue threshold per AASHTO Bridge Design Code. The Contractor shall allow 30 days for the Engineer's review and approval of the revised transportation plan. Should the Engineer approve the Contractor's revised transportation plan, the Engineer will perform a visual inspection of the steel segments as stated above.

The Engineer's approval of the mitigation plan and revised transportation plan in no way relieves the Contractor of his responsibility to transport the steel segments without damage and without exceeding the fatigue stress levels as specified herein.

Full compensation for transportation of the steel segments without damage, including transportation plan, mitigation plan, repair of rejected segments and providing access for the Engineer's inspection shall be considered as included in the contract prices paid for the items of work involved and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "INSPECTION AND TESTING," the following column is added to the table under "3. TOWER":

COMPONENT	Weld Type			Extent & Type of Testing			Notes
	CJP	PJP	Fillet	RT	UT	MT	
3. TOWER							
Tower Base Shear Plates to the Skin Plate	X				100%		

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FIELD WELDING," Item A in the eighth paragraph is revised as follows:

"A. Mechanized processes such as SAW or automated FCAW shall be used for field welding of the tower skin and crossbeam and box shell plates. Where mechanized processes are not feasible or practical, an alternative process may be used as approved by the Engineer."

In the Special Provisions, Section 10-3.01, "DESCRIPTION," the following is added after Item L of the first paragraph:

"M. SAS Superstructure and Skyway Structure Girder Interface Westbound (see E-101A) shall include, but not be limited to the following:

1. Install girder access light fixtures and light switches.
2. Install all conduit, cable trays, pull/junction boxes, fittings and supports.
3. Install and terminate cable itemized under "Cost Break-down" in these special provisions.
4. Install and terminate cables as shown on the plans and cable schedule.
5. Install and terminate equipment grounding system as shown on the plans.
6. Conduct functional test on all power, lighting and receptacle circuits.

Full compensation for SAS Superstructure and Skyway Structure Girder Interface Westbound shall be considered as included in the contract lump sum price paid for SAS Superstructure Girder Westbound and no separate payment will be made therefor.

N. SAS Superstructure and Skyway Structure Girder Interface Eastbound (see E-186A) shall include, but not be limited to, the following:

1. Install girder access light fixtures and light switches.
2. Install all conduit, cable trays, pull/junction boxes, fittings and supports.
3. Install and terminate cable itemized under "Cost Break-down" in these special provisions.
4. Install and terminate cables as shown on the plans and cable schedule.
5. Install grounding system as shown on the plans.
6. Conduct functional test on all power, lighting and receptacle circuits.

Full compensation for SAS Superstructure and Skyway Structure Girder Interface Eastbound shall be considered as included in the contract lump sum price paid for SAS Superstructure Girder Eastbound and no separate payment will be made therefor."

In the Special Provisions, Section 10-3.03, "COST BREAK-DOWN," the following is added to the end of the section:

"M. SAS Superstructure and Skyway Structure Girder Interface Westbound electrical installation is shown on the plans (see E-101A) and shall include, but not be limited to the following additional items of the cost break-down:

1. Cable- list each size and type.
2. Termination and splice- list each size and type.
3. Conduits, fittings and supports- list each size and type.
4. Cable trays- list size and type and installation method.
5. Cable tray, fittings and supports-list each size and type.
6. Hinge AW connections- list each size, type and installation method.
7. Grounding system- list size and type.
8. Pull boxes and junction boxes- list each size and type.
9. Termination boxes- list each size and type.
10. Light switches and fixtures- list each size and type.
11. Equipment rental- list each over $500.00- list size and type.
12. Electrical hardware- list size and type.
13. Embed strut channel- list size and type."

N. SAS Superstructure and Skyway Structure Girder Interface Eastbound electrical installation is shown on the plans (see E-186A) and shall include, but not be limited to, the following additional items of the cost break-down:

1. Cable- list each size and type.
2. Termination and splice- list each size and type.
3. Conduits, fittings and supports- list each size and type.
4. Cable trays- list size and type and installation method.
5. Cable tray, fittings and supports-list each size and type.
6. Hinge AE connections- list each size, type and installation method.

7. Grounding system- list size and type.
8. Pull boxes and junction boxes- list each size and type.
9. Termination boxes- list each size and type.
10. Light switches and fixtures- list each size and type.
11. Equipment rental- list each over $500.00- list size and type.
12. Electrical hardware- list size and type.
13. Receptacles list size and type.
14. Equipment required for functional testing- list size and type.
15. Embed strut channel- list size and type."

In the Special Provisions, Section 10-4.06, "DEHUMIDIFIER SYSTEM," subsection "GENERAL," subsection "Submittals," Item A is revised as follows:

"A. Submit product data, details, manufacturer's operating and maintenance instructions for all equipment and components specified. Include maintenance log forms. Components shall be suitable for installation within the access openings shown on the plans."

In the Special Provisions, Section 10-4.06, "DEHUMIDIFIER SYSTEM," subsection "MATERIALS," subsection "Dehumidifiers," the following paragraph is added after the first paragraph:

"Dehumidifier systems shall be adjusted as necessary to allow installation using the access openings shown on the plans."

To Proposal and Contract book holders:

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY:

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

5-1.16 INTEGRATED SHOP DRAWINGS

Attention is directed to "Working Drawings" in these special provisions.

Difficult construction is anticipated at the Pier W2 cap beam and Pier E2 cross beam that are highly congested with reinforcing steel, high strength rods, post-tensioning strand tendons, cable tie-down pipe sleeves, anchor bolts, and other concrete embedded items as shown on the plans. The Contractor shall develop three-dimensional integrated shop drawings (ISD) for the Pier W2 cap beam and Pier E2 cross beam in accordance with the details shown on the plans and the requirements of this section. The ISD shall be of sufficient detail to demonstrate compatibility of the embedded items within the concrete.

Prior to commencing work on the ISD, the Contractor (including any sub-consultants hired to work on the ISD) shall attend a meeting with the Engineer to discuss the ISD work.

The Contractor shall utilize commercially available software that checks for interference in three dimensions. Prior to acquiring the software, the Contractor shall submit to the Engineer the product name and application features of the software for review and approval. The software shall be compatible with the computer-aided drafting (CAD) software used to develop the ISD. Bar reinforcement shall be shown with deformed diameters. The Contractor shall develop CAD files using different layers for each type of embedded item such that the sequence of construction of the member or area being detailed can be shown.

Attention is directed to "Working Drawing Campus" in these special provisions for other equipment and software requirements.

Embedded items that are to be shown on the ISD shall include, but are not limited to, the following:

A. Prestressing ducts, anchorages, and blockouts
B. Bar reinforcing steel and splices including lap, welded, and mechanical splices
C. Anchor bolts
D. Anchor bolt plates
E. Anchorage reinforcement and hardware
F. Grout vents
G. High strength rods
H. Cable tie-down pipe sleeves
I. Seismic joint blockout
J. Drainage pipe
K. Utility conduits and openings
L. Inserts, bolt sleeves and studs
M. Other items, as shown on the plans

The Contractor shall use the ISD to identify and eliminate all interference between the planned positions of embedded items and to satisfy the concrete cover shown on the plans.

If a conflict is identified, the Contractor shall document the conflict and propose changes to the embedded items in the ISD's to resolve the conflict. Proposed changes to the embedded items shall be made by a licensed Engineer practicing Civil Engineering with extensive previous experience developing ISD.

The Contractor’s proposed changes in the ISD shall comply with the following sequence of item adjustments:

A. Pier W2 Cap Beam:

1. Non structural embedded items
2. Bar reinforcing steel
3. Vertical prestressing ducts
4. Transverse prestressing ducts
5. Continuity prestressing ducts
6. High strength anchor rods
7. Cable tie-down cable pipe sleeves

B. Pier E2 Cross Beam:

1. Nonstructural embedded items
2. Bar reinforcing steel
3. Prestressing ducts
4. Shear key anchor bolts
5. Bearing anchor bolts

The Contractor shall use the following measures in the order prescribed to resolve interference issues during the preparation of the ISD:

A. Adjust reinforcement spacing.
B. Bundle bars.
C. Relocate splices.
D. Change reinforcement size and number. Reduction of the total reinforcement area will not be permitted, unless otherwise approved by the Engineer.
E. Change reinforcement shape.
F. Move embedded inserts.

The ISD to be submitted to the Engineer shall include the following:

A. Three sets of the ISD corresponding to the details as shown on the plans without any modifications. These ISD shall indicate all conflicts including locations of the conflicts and items involved in the conflicts.
B. Three complete lists of conflicts with descriptions and the Contractor's proposed modifications for each conflict.
C. Three sets of the ISD corresponding to the details as shown on the plans with incorporation of the Contractor's proposed modifications. These ISD shall indicate that all previous identified conflicts have been resolved and concrete cover requirements as shown on the plans are met.
D. ISD shall be 559 mm x 864 mm in size and shall use colored ink to differentiate each type of embedded items. For each portion of the structure, ISD shall include a minimum of six isometric views. Any two isometric views shall be 90 degrees apart.
E. Three copies of the ISD in CAD file format on compact discs or tape for use by the Engineer.

An ISD submittal that complies with all of the above requirements, in the opinion of the Engineer, will be defined as a complete ISD submittal. Submittal of isometric drawings made from ISD shall in no way relieve the Contractor from any other working drawing submittal required by these special provisions or the Standard Specifications.

CAD files of the contract drawings will not be made available to the Contractor.

After an ISD submittal is received by the Engineer, the Contractor shall allow the Engineer 7 days to review the ISD submittal for completeness. If determined to be complete, the Engineer shall have 28 working days from the day of receipt to review and approve the ISD submittal. For proposed modifications that are not approved by the Engineer, the Engineer will propose alternative modifications to the Contractor. The Contractor shall submit revised ISD incorporating the Engineer’s alternative modifications as specified in this section. If more than one ISD is submitted at one time, the time to be allowed for the review of the ISD shall not be less than the review time specified above plus 14 days for each ISD submittal still under review and the Contractor shall designate the sequence in which the submittals are to be reviewed.

Assembly of the mockup represented by the ISD and construction of the Pier W2 Cap Beam and Pier E2 Cross Beam shall not begin until the Engineer has approved the complete ISD submittal with all conflicts resolved.

No extension of time will be permitted for the Contractor’s failure to identify all conflicts or to complete the ISD as required by these special provisions.

Full compensation for preparing ISD, including all revisions necessary due to conflict resolution measures taken by the Contractor, shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.